

Remarks/Arguments

This amendment responds to the office action of October 31, 2008. Moreover, applicant respectfully adopts and incorporates into this response all prior responses filed by applicant in this application.

Reconsideration of the rejection of claims 32-39 is respectfully requested. In the applicant's prior response, applicants limited all of the claims to extraction and processing of **human** objects and their activities relative to the enterprise. From the specification, it is clear that human activities are extremely important to the preferred way of practicing this invention, and limiting the claims to the extraction and processing of human objects and their activities is submitted to clearly define over the Pfeiffer reference, and to comply with the examiner's suggestion that the claims be narrowed to include specific activities of the enterprise that the invention is trying to track and report. Applicants also noted that there was already some language in independent claim 32 that applicants believed was not disclosed in the Pfeiffer reference, and applicants submitted additional language believed to clearly limit all of the claims in a manner that clearly distinguishes them from Pfeiffer.

More specifically, the language from prior claim 32 that applicants believed is not found in the Pfeiffer reference is the language that what is extracted solely from the sensor data includes data changes that enables**connection of object features that should be connected**. Applicants noted that they had difficulty in finding anything in the abstract of Pfeiffer that discloses or suggests the foregoing feature of claim 32. Moreover, applicants sought to further distinguish from the Pfeiffer reference, by limiting all of the claims to the extraction and analysis of **human** objects, and the amendments applicants proposed are all consistent with this limitation. With such a limitation, applicants submitted that this application is clearly not disclosed by and cannot be an obvious modification of the Pfeiffer reference, which is solely concerned with missile tracking.

In the office action of October 31, 2008, Pfeiffer is relied upon as a primary reference against all claims, and newly cited Ghazarian reference is relied upon for the premise that

whereas Pfeiffer does not teach human activity, human object, extracting human objects and movement, Ghazarian teaches human activity, human object, extracting human objects and movement. The office action further states that it would have been obvious to one of ordinary skill to have modified Pfeiffer's tracking system with human objects for the benefit of personnel tracking that could be deployed extensively in Homeland Security applications.

Applicants respectfully disagree that Ghazarian teaches anything that would provide a reason to modify Pfeiffer's missile tracking system, to provide the invention defined in claims 32-39 without the express benefit of applicants' disclosure. Those skilled in the art of computer vision and object detection would surely place human detection in a different class from missile detection, owing to the fact a missile is a rigid body and human is not. Detection and tracking of rigid bodies (e.g., missiles, vehicles) is a fundamentally different problem from that of detecting and tracking non-rigid bodies (e.g., humans). A rigid body does not have articulating elements whereas a non rigid body can be comprised of, or modeled as having, many articulating (sub-) elements. Furthermore, as a missile is a ballistic object, its trajectory and behavior will follow very predictable paths and enable its detection and tracking to be approached deterministically according to basic laws of physics, whereas a non ballistic (e.g., human) object must be detected and tracked statistically and not merely according to physical principles of flight dynamics. Thus, applicant respectfully submits that the human detection and missile detection problems are fundamentally distinct and require distinct to their respective problems. Therefore, without the express benefit of applicants' disclosure, why would one of ordinary skill find a reason to modify Pfeiffer's missile tracking system to effectively change its entire objective and monitor human activities of interest to an enterprise? For that reason alone applicants respectfully submit that the invention of claims 32-39 is not an obvious modification of Pfeiffer, and request reconsideration of the rejection on that basis. On the other hand, if this ground of rejection is maintained, applicants request that the patent and trademark office provide evidence that supports its position that it **would** be obvious to modify Pfeiffer's missile tracking system with human objects for the benefit of personal tracking. A statement that such a modification "could" be deployed extensively in Homeland Security applications is respectfully submitted to be speculation, and not evidence that the differences between the invention of claims 32-39 and

Pfeiffer are such that the invention of claims 32-39 would have been obvious to one of ordinary skill in the art.

Moreover, it is respectfully submitted that specific features of the present invention that are defined in claims 32-39 would not have been obvious to one of ordinary skill in the art, under any reading of Pfeiffer or Gharazian, alone or in combination.

For example, claims 32-35 recite that applicants invention includes, *inter alia*,
“...(iii) extract solely from the sensor data changes that enables separation of foreground and background objects, including human objects, localization of human object features, **and connection of human object features that should be connected**,”... (boldface added)

Moreover, claims 39 and 36-38 recite that applicants invention includes, *inter alia*,
“...c. extracting solely from the sensor data, via the computer, a human object and the state of activity for the human object with respect to the state of activity for other physically and visually distinct objects in the sensor data, irrespective of object compliance, including separation of foreground and background objects, including human objects, localization of human object features, **and connection of human object features that should be connected**;...” (boldface added)

Thus, all of claims 32-39 recite, *inter alia*, that applicants invention includes extracting from sensor data information that enables **both separation of foreground and background objects, and connection of human object features that should be connected**.

In regard to the foregoing recitation, the office action notes that according to Pfeiffer’s abstract, a “target is separated from background scene”. That is the only aspect of Pfeiffer that is referenced to the foregoing language of claims 32-39. However, the foregoing language clearly requires **both** separation of foreground and background objects, **and** connection of human object features that should be connected, and the statement of the office action does not address the connection of human object features that should be connected (e.g. connection of human body parts, as described in paragraphs 51 and 52 of applicants’ specification). The separation of a missile from its background does not provide a basis to conclude that cannot provide a basis to conclude that the only differences between Pfeiffer and claims 32-39 are that Pfeiffer does not

teach human activity, human object, extracting human objects and movement. Pfeiffer clearly does not disclose anything that even resembles the concept of claims 32-39 that recite **both** separation of foreground and background objects, **and** connection of human object features that should be connected. Moreover, there is nothing in Gharazian, the secondary reference has no disclosure or suggestion of anything that relates to a human, that also discloses or suggests **both** separation of foreground and background objects, **and** connection of human object features that should be connected. Therefore, the differences between claims 32-39 and Pfeiffer and/or Gharazian are not such that the invention of claims 32-39 would have been obvious, because there is simply no basis to conclude that either reference discloses or suggests, *inter alia*, **both** separation of foreground and background objects, **and** connection of human object features that should be connected.

Thus, for the foregoing reasons, applicants respectfully submit that claims 32-39 define the present invention in a manner that is not disclosed by or obvious from the cited references. However, if the examiner believes that further amendment of the claims would bring out the features that applicants believe make this application patentable, undersigned would welcome the opportunity to discuss the case further with the examiner. For example, if further bringing out in claims 32-39 that the human features that are connected are human body parts would even more clearly overcome the cited references, undersigned would welcome an opportunity to discuss such issues with the examiner.

Therefore, entry of this amendment and favorable action is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink that reads "Lawrence R. Oremland". The signature is written in a cursive style with a large, stylized 'L' and 'O'.

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Attorney for Applicant